APPARATUS FOR PREVENTING THE SOILING OF BEDCLOTHING

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ABSTRACT

The invention relates to an apparatus for preventing the soiling of bedclothes such as bedsheets, blankets and bedspreads. The apparatus incorporates waterproof material placed in strategic locations to prevent urine from reaching the bedclothing. The waterproof material is advantageously placed beneath and above the individual user to prevent soiling of both the bedclothing underneath and the bedclothing on top of the individual user. The waterproof material on top of the individual user is limited to a central portion, and the remaining material is a breathable fabric to allow for a more comfortable sleep environment.
APPARATUS FOR PREVENTING THE SOILING OF BEDCLOTHING

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of and priority to U.S. Provisional Patent Application No. 61/787,679 for Apparatus for Preventing the Soiling of Bedclothing, filed on Mar. 15, 2013, which provisional application is hereby incorporated by reference in its entirety.

FIELD OF THE INVENTION

[0002] The disclosure relates generally to bedclothes, and, more specifically, to an apparatus for preventing the soiling of bedclothes.

BACKGROUND OF THE INVENTION

[0003] Many children and adolescents experience intermittent or chronic urinary incontinence, often taking the form of bedwetting during naps or nighttime sleep. Typically, children at least five years of age who experience persistent nighttime wetting will be diagnosed as having nocturnal enuresis. The causes of nocturnal enuresis are varied and include a small bladder, stress, delayed development of toilet training skills, neurological disorders, and persistent urinary tract infections. For the parents of children experiencing either normal bedwetting (e.g., bedwetting by children under five) or an elimination disorder like nocturnal enuresis, ensuring that the child’s bedclothes (e.g., bedding, sheets, bedspread, comforter, and/or blankets) remain clean and sanitary can be a time-consuming and stressful chore. If a child is bedwetting virtually every night, the parent faces the task of removing the soiled sheets and blankets, laundering them, then returning them to the child’s bed in time for sleep that night. Over time, this can lead to significant stress for the parent as they face a seemingly endless cycle of dirty bedclothes.

[0004] Some adults experience urinary incontinence issues as well. These adults may experience a leakage of urine due to medications they are taking, physiological conditions, or as a result of other medical conditions. The urinary incontinence can sometimes manifest itself in the form of bedwetting. As such, some adults must also grapple with the burden of frequently laundering soiled bedclothes.

[0005] In the hospital or nursing home setting, caregivers often deal with patients who have conditions that result in frequent soiling of bedclothes. These conditions may include various forms of incontinence, or bleeding or drainage from wounds or sores. Repeated removal of all of the patient’s bedclothes cannot only be time-consuming for the caregiver, but can be disturbing for the patient, who typically must be removed from the bed to allow for a changing of the bedclothes.

[0006] There exists a variety of products designed to protect bedclothes and mattresses from soiling. For example, there are waterproof sheets or pads that can be placed underneath the person to prevent the underlying sheets and mattress from becoming soiled. While the positioning of waterproof materials beneath the individual is generally effective at preventing the soiling of the underlying sheet and mattress, this approach does nothing to prevent the soiling of sheets, blankets and bedspreads that may be lying on top of the individual. These overlying bedclothes often become soiled either directly, or after coming into contact with urine that has collected on top of the waterproof material positioned beneath the individual. The overlying bedclothes can be protected from soiling by placing an additional waterproof sheet in between the individual and the overlying bedding. This solution is unsatisfactory, however, because the overlying waterproof sheet, which is typically comprised of a non-breathable fabric, does not allow for sufficient airflow and cooling of the patient. This results in an uncomfortable overheating of the individual, thereby making it difficult or impossible to achieve restful sleep.

[0007] What is needed is an apparatus that protects bedclothing from becoming soiled while allowing for suitable airflow. In particular, what is needed is a protective apparatus that protects the bedclothing underneath and on top of the individual while allowing the individual to remain at a comfortable temperature to achieve restful sleep.

SUMMARY OF THE INVENTION

[0008] In one aspect, the present invention embraces an apparatus for preventing the soiling of bedclothes.

[0009] In another aspect, the present invention embraces an apparatus for preventing the soiling of bedclothes underneath and on top of an individual user.

[0010] In yet another aspect, the present invention embraces an apparatus for preventing the soiling of bedclothes, which protective apparatus prevents the soiling of bedclothes while maintaining a comfortable sleeping temperature for the individual.

[0011] In yet another aspect, the present invention embraces an apparatus for preventing the soiling of bedclothes that includes a tubular member. The tubular member has a longitudinally-elongated top panel. The longitudinally-elongated top panel has a first edge, a second edge, a peripheral portion, and a central portion. The tubular member also has a longitudinally-elongated bottom panel having a first edge and a second edge. The first edge of the longitudinally-elongated bottom panel is attached substantially along the first edge of the longitudinally-elongated top panel. The tubular member also has a head end and a foot end. The central portion of the longitudinally-elongated top panel is substantially made of waterproof material. The peripheral portion of the longitudinally-elongated top panel is substantially made of breathable material.

[0012] In one embodiment, the apparatus includes a securing member having a first end and a second end. The first end of the securing member is attached to the tubular member.

[0013] In another embodiment, the securing member comprises a flap. The flap is configured such that at least a portion of the flap may be inserted between a first supporting surface and a second supporting surface to substantially prevent movement of the apparatus along the plane of the first supporting surface during use.

[0014] In yet another embodiment, the longitudinal length of the securing member is greater than one-half the longitudinal length of the tubular member.

[0015] In yet another embodiment, the flap comprises a fabric panel.

[0016] In yet another embodiment, the first supporting surface comprises a mattress.

[0017] In yet another embodiment, the second supporting surface comprises a bed frame.

[0018] In yet another embodiment, the second supporting surface comprises a box spring.
In yet another embodiment, the apparatus includes a handle member.

In yet another embodiment, the handle member is attached to the tubular member.

In yet another embodiment, the handle member is attached to the securing member.

In yet another embodiment, the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel.

In yet another embodiment, the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a zipper.

In yet another embodiment, the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a hook-and-loop fastener.

In yet another embodiment, the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a plurality of snap fasteners.

In yet another embodiment, the waterproof material comprises vinyl.

In yet another embodiment, the waterproof material comprises polyurethane laminate (PUL).

In yet another embodiment, the breathable material comprises cotton.

In yet another embodiment, the breathable material comprises polyester.

In another aspect, the present invention embraces an apparatus for preventing the soiling of bedclothes. The apparatus includes a tubular member having a longitudinally-elongated top panel. The longitudinally-elongated top panel has a first edge, a second edge, a peripheral portion, and a central portion. The tubular member further has a longitudinally-elongated bottom panel having a first edge and a second edge. The first edge of the longitudinally-elongated bottom panel is attached substantially along the first edge of the longitudinally-elongated top panel. The tubular member also has a head end and a foot end. The apparatus also includes a securing member having a first end and a second end. The first end of the securing member is attached to the tubular member. A handle member is attached to either the tubular member or the securing member. The central portion of the longitudinally-elongated top panel is substantially comprised of waterproof material. The substantially-elongated bottom panel is substantially comprised of waterproof material. The peripheral portion of the longitudinally-elongated top panel is substantially comprised of breathable material.

The foregoing, as well as other objectives and advantages of the invention, and the manner in which the same are accomplished, are further specified within the following detailed description and its accompanying drawings.

FIG. 4 is a top cross-sectional view of an exemplary apparatus according to the present disclosure.

FIGS. 1 through 4. In an exemplary embodiment, the apparatus 5 for preventing the soiling of bedclothes comprises a tubular member 10. The tubular member 10 defines an opening 60 of sufficient size to allow for an individual (e.g., a child or adult human) to be positioned at least partly inside of said tubular member 10. In this way, when the apparatus 5 is in use, the tubular member 10 envelopes at least a portion (e.g., the lower torso) of the individual positioned within the opening 60. It will be understood that the use of the term “tubular” is not intended to be limited to a strictly tube-shaped body. Instead, the term embraces a generally tubular elongated body. The tubular member 10 has a head end and a foot end. When in use, the head end would be the end positioned nearest the head of the individual user, and the foot end would be the end positioned nearest the feet of the individual user.

The tubular member 10 is comprised of a longitudinally-elongated top panel 15 and a longitudinally-elongated bottom panel 20. The longitudinally-elongated top panel 15 has a first edge and a second edge. The longitudinally-elongated top panel 15 also has a peripheral portion 25 and a central portion 30 (e.g., middle portion). The central portion 30 is substantially comprised of waterproof material. The term waterproof is intended to mean that the material substantially prevents the penetration of water or other liquids through the material. Typically, the waterproof material is a fabric having a waterproof coating. Examples of waterproof material include vinyl, rubber and polyurethane laminate. When the individual is positioned inside of the apparatus 5 (e.g., with the individual’s torso and legs substantially surrounded by the apparatus), the central portion 30 is positioned on top of the individual user’s lower torso, thereby serving as a waterproof barrier preventing, for example, urine from soaking through onto the bedclothes overlaying the individual user inside the apparatus 5. The central portion 30 is substantially waterproof because that area is most likely to be in the position where the individual would excrete urine when the individual is in a face-up position (e.g., when the individual is sleeping on his or her back).

The peripheral portion 25 is substantially constructed of a breathable (e.g., porous) material, typically a breathable fabric (e.g., cotton fabric, cotton). The breathable fabric allows for adequate circulation of air around the individual, thereby providing for a suitable sleeping environment (e.g., a comfortable temperature). In a preferred embodiment,
the peripheral portion 25 is comprised of a breathable fabric that also has moisture-repelling qualities. This allows for much of the moisture to be wicked away from the child while also allowing for some moisture to contact the child’s body, thereby alerting the child that a bedwetting has occurred. This can be useful in the nighttime toilet training process.

By limiting the waterproof area to the central portion 30, the longitudinally-extended top panel 15 more closely resembles a typical top bedsheet than if it would if it were constructed entirely of waterproof material, which tends to be less comfortable for the individual user. In a preferred embodiment, the central portion 30 may be in a shape that is attractive or interesting to children (e.g., a star or a flower).

The longitudinally-elongated bottom panel 20 includes a first edge and a second edge. The first edge of the longitudinally-elongated bottom panel 20 is attached substantially along the corresponding first edge of the longitudinally-elongated top panel 15. The second edge of the longitudinally-elongated bottom panel 20 is attached substantially along the corresponding second edge of the longitudinally-elongated top panel 15. The longitudinally-elongated top panel 15 and the longitudinally-elongated bottom panel 20 may be fixably attached (e.g., sewn together), removably attached (e.g., zipped or snapped together), or integral with each other. The longitudinally-elongated bottom panel 20 is typically substantially comprised of a waterproof material (e.g., fabric with a waterproof coating), thereby preventing urine or other material from soiling the underlying bedclothes or supporting surface.

In a preferred embodiment, the second edge of the longitudinally-elongated bottom panel 20 is removably attached to the corresponding second edge of the longitudinally-elongated top panel. The two edges may be removably attached using any acceptable fastening means, including a hook-and-loop fastener, a zipper, a plurality of snap fasteners, and/or buttons.

In a preferred embodiment, the apparatus 5 includes a securing member 50. The securing member 50 is attached to the tubular member 10. Typically, the securing member 50 is a panel having a first end attached to the tubular member 10 and a second end suitable for removably securing the apparatus to a first supporting surface (e.g., mattress). In a preferred embodiment, the securing member 50 is a flap (e.g., a fabric flap, fabric panel). The flap may be configured such that at least a portion of the flap may be inserted between the first supporting surface and a second supporting surface (e.g., mattress, box springs, bed frame, or floor). When tucked in between the first supporting surface and the second supporting surface, the supporting member 50 (e.g., flap) substantially prevents movement of the apparatus 5 along the plane of the first supporting surface during use (e.g., prevents horizontal movement of the apparatus 5). This allows the apparatus 5 to remain substantially in the best position vis-à-vis the individual and the first supporting surface for preventing the leakage of moisture (e.g., urine) outside of the apparatus 5 during use, thereby preventing the soiling of bedclothes either beneath or above the apparatus 5.

In an alternative embodiment, the securing member 50 may be configured to be removably attached to either the first supporting surface or the second supporting surface, such as by various fastening means, including a hook-and-loop fastener, a snap fastener, a button, a tie, etc.

As depicted in FIG. 3, when the securing member 50 is tucked beneath the mattress, the securing member 50 prevents the apparatus 5 from becoming displaced during use (e.g., during sleep). If the apparatus 5 were to become displaced, it may impair the effectiveness of the apparatus 5. For example, if the central portion 30 were to move away from the individual user’s lower torso area, there would be no waterproof barrier protecting the overlying bedclothes from becoming soiled from, for example, nighttime urination. In an alternative embodiment, the securing member 50 may be a strap.

In a preferred embodiment, the longitudinal length of the securing member 50 is greater than one-half of the longitudinal length of the tubular member 10. In general, the longer the securing member 50 is in proportion to the length of the tubular member 10, the greater the stability that can be achieved. In other words, using a longer securing member 50 generally allows for greater control over the stability of the apparatus 5 during use.

In a preferred embodiment, the apparatus 5 according to the present disclosure includes a handle member 55 attached to the tubular member 10. The handle member 55 allows for simplified removal of the apparatus 5 from the mattress. When a parent or caregiver notices that the apparatus 5 has become soiled, he or she can slide the apparatus 5 off of the child or patient and easily pull it off the bed using the handle member 55. The parent can simply pull the handle member 55 and the entire apparatus 5 slides off of the mattress. In this way, the underlying and overlying bedding do not have to be removed during the changing process, and a clean apparatus 5 can be quickly placed on the bed so that the child or patient can resume sleeping. Alternatively, the child may be alerted by the wetness of the apparatus 5 that a bedwetting has occurred, and may simply pull the handle member 55 to remove the soiled apparatus 5 on his or her own. In this way, the simplified changing process facilitated by the present apparatus 5 can allow for a feeling of greater independence for the child. Typically, the handle member 55 is comprised of an elongated strap having two ends, with each end attached to the tubular member 10. In an alternative embodiment, the handle member 55 may be attached to the securing member 50.

As shown in FIG. 4, the tubular member’s head end defines an opening 60 for receiving the individual. Typically, the tubular member’s foot end also defines the opening 60, thereby allowing the individual’s feet and lower legs to extend through the apparatus 5 and allowing for increased airflow. In an alternative embodiment, the tubular member’s head end defines an opening 60 but the foot end is closed. In this alternative embodiment, the apparatus 5 resembles a sleeping bag. This configuration provides greater insulation for the individual user, which may be desirable in colder conditions.

In the specification and figures, typical embodiments of the invention have been disclosed. The present invention is not limited to such exemplary embodiments. Unless otherwise noted, specific terms have been used in a generic and descriptive sense and not for purposes of limitation.

What is claimed is:
1. An apparatus for preventing the soiling of bedclothes comprising:
a tubular member, said tubular member having a longitudinally-elongated top panel having a first edge, a second edge, a peripheral portion, and a central portion, said tubular member further having a longitudinally-elon-
gated bottom panel having a first edge and a second edge, said first edge of said longitudinally-elongated bottom panel being attached substantially along said first edge of said longitudinally-elongated top panel, and said tubular member further having a head end and a foot end;

wherein said central portion of said longitudinally-elongated top panel is substantially comprised of waterproof material; and

wherein said peripheral portion of said longitudinally-elongated top panel is substantially comprised of breathable material.

2. The apparatus of claim 1 further comprising a securing member having a first end and a second end, said first end of the securing member being attached to the tubular member.

3. The apparatus of claim 2, wherein the securing member comprises a flap;

wherein the flap is configured such that at least a portion of the flap may be inserted between a first supporting surface and a second supporting surface to substantially prevent movement of the apparatus along the plane of the first supporting surface during use.

4. The apparatus of claim 2, wherein the longitudinal length of the securing member is greater than one-half the longitudinal length of the tubular member.

5. The apparatus of claim 3, wherein the flap comprises a fabric panel.

6. The apparatus of claim 3, wherein the first supporting surface comprises a mattress.

7. The apparatus of claim 6, wherein the second supporting surface comprises a bed frame.

8. The apparatus of claim 6, wherein the second supporting surface comprises a box spring.

9. The apparatus of claim 1, comprising:

   a handle member.

10. The apparatus of claim 9, wherein the handle member is attached to the tubular member.

11. The apparatus of claim 9, wherein the handle member is attached to the securing member.

12. The apparatus of claim 1, wherein the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of said longitudinally-elongated top panel.

13. The apparatus of claim 12, wherein the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a zipper.

14. The apparatus of claim 12, wherein the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a hook-and-loop fastener.

15. The apparatus of claim 12, wherein the second edge of the longitudinally-elongated bottom panel is removably attached substantially along the second edge of the longitudinally-elongated top panel by a plurality of snap fasteners.

16. The apparatus of claim 1, wherein the waterproof material comprises vinyl.

17. The apparatus of claim 1, wherein the waterproof material comprises polyurethane laminate (PUL).

18. The apparatus of claim 1, wherein the breathable material comprises cotton.

19. The apparatus of claim 1, wherein the breathable material comprises polyester.

20. An apparatus for preventing the soiling of bedclothes comprising:

   a tubular member, said tubular member having a longitudinally-elongated top panel having a first edge, a second edge, a peripheral portion, and a central portion, said tubular member further having a longitudinally-elongated bottom panel having a first edge and a second edge, said first edge of said longitudinally-elongated bottom panel being attached substantially along said first edge of said longitudinally-elongated top panel, and said tubular member further having a head end and a foot end;

   a securing member having a first end and a second end, said first end of the securing member being attached to the tubular member; and

   a handle member attached to either the tubular member or the securing member;

wherein said central portion of said longitudinally-elongated top panel is substantially comprised of waterproof material;

wherein said longitudinally-elongated bottom panel is substantially comprised of waterproof material; and

wherein said peripheral portion of said longitudinally-elongated top panel is substantially comprised of breathable material.

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